Marked-Up Version of Amended Claims 1, 2, 10-18, 27-34, 46, 50, 51, 60-66, 78 and 79

1 (Amended). An apparatus, comprising:

an expandable member being sized to be positionable in a sphincter, the expandable member having a deployed state and a nondeployed state, the deployed state sized and applying sufficient force to the sphincter to dilate the sphincter at least 5 mm; [and]

an energy delivery device coupled to the expandable member, the energy delivery device [having a configuration that] configured to controllably produce[s] lesions of a sufficient size, number and configuration in an interior of the sphincter so as to create a selectable tightening of the sphincter[.]; and

a flexible coupling member coupled to the expandable member, the coupling member including at least one lumen and configured to be maneuverable in a body lumen.

2 (Amended). The apparatus of claim 1, wherein [the] a configuration of the energy delivery device includes a plurality of energy delivery members distributed on a surface of the expandable member, the apparatus further comprising:

at least one aperture disposed on one of the expandable member or the flexible coupling member, the at least one aperture configured to direct a cooling fluid to cool the energy delivery device.

10 (Amended). The apparatus of claim 1, wherein the energy delivery device is configured to form lesions [are formed] in a muscle tissue underlying a sphincter mucosal layer.

11 (Amended). The apparatus of claim 1, wherein the [sphincter is] deployed state is sized and applies sufficient force to the sphincter to dilate the sphincter between 5 and 40 mm and the energy delivery device is configured to dilate one of a lower esophageal sphincter or an adjoining tissue.

12 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions at a fixed depth from a mucosal surface layer of the sphincter of no more than 4 mms.

13 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and minimizes injury to a mucosal and a submucosal layer of the sphincter.

14 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and reduce[s] a frequency of sphincter relaxation.

15 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and reduce[s] a duration of sphincter relaxation.

16 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and reduce[s] a frequency of reflux of stomach contents into an esophagus.

17 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and reduce[s] a frequency of a symptom of reflux of stomach contents into an esophagus.

18 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] the lesions and reduce[s] an incidence of a sequela of reflux of stomach contents into an esophagus.

27 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to deliver[s] energy to promote a fibroblast cell infiltration at a site of the lesions.

28 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to deliver[s] energy to promote a fibroblast growth at a site of the lesions.

29 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to deliver[s] energy that promotes a my[l]ofibroblast cell infiltration at a site of the lesions.

30 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] a tightening of a lower esophageal sphincter without permanently damaging anatomical structures near the lower esophageal sphincter.

31 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] a tightening of the lower esophageal sphincter without permanently damaging an aorta positioned near the lower esophageal sphincter.

32 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] a tightening of the lower esophageal sphincter without permanently damaging a vagus nerve positioned near the lower esophageal sphincter.

33 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] a tightening of the lower esophageal sphincter without permanently damaging an esophageal plexus of nerves and veins positioned near the lower esophageal sphincter.

34 (Amended). The apparatus of claim 1, wherein [the configuration of] the energy delivery device is configured to create[s] a tightening of the lower esophageal sphincter while preserving a blood supply to the lower esophageal sphincter.

46 (Amended). The apparatus of claim 45, wherein a proximal portion of the extension member is maneuverable by a medical practitioner.

50 (Amended). An apparatus comprising:

an expandable member means sized to be positionable in a lower esophageal sphincter and non-permanently dilate the lower esophageal sphincter from a contracted state, the expandable member means having a deployed state and a nondeployed state, the deployed

state sized and applying sufficient force to the sphincter to dilate the sphincter between 5 and 40 mm;

an energy delivery device means coupled to the expandable member means, the energy delivery device means [having a configuration that] configured to controllably produce[s] lesions of a sufficient size, number and configuration in an interior of the lower esophageal sphincter to create a tightening of the lower esophageal sphincter;

a flexible coupling member means coupled to the expandable member means, the coupling member means including at least one lumen means and configured to be maneuverable in a body lumen; and,

wherein the lower esophageal sphincter returns to a contracted state upon a removal of the expandable member means from the sphincter.

51 (Amended). The apparatus of claim 50, wherein the energy delivery device means [has a configuration that] is configured to controllably produce[s] lesions in an interior of the lower esophageal sphincter without creating a permanent impairment of the lower esophageal sphincter's ability to achieve a physiologically normal state of closure.

60 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to deliver[s] energy to the interior of the lower esophageal sphincter and create[s] a fibroblast proliferation in the interior of the lower esophageal sphincter.

61 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to deliver[s] energy to the interior of the lower esophageal sphincter and create[s] a myofibroblast proliferation in the lower esophageal sphincter.

62 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to create[s] a tightening of the lower esophageal sphincter without permanently disrupting an aorta positioned near the lower esophageal sphincter.

63 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to create[s] a tightening of the lower esophageal sphincter

without permanently damaging a vagus nerve positioned near the lower esophageal sphincter.

64 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to create[s] a tightening of the lower esophageal sphincter without permanently damaging an esophageal plexus of nerves and veins positioned near the lower esophageal sphincter.

65 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to create[s] a tightening of the lower esophageal sphincter while preserving a blood supply to the lower esophageal sphincter.

66 (Amended). The apparatus of claim 50, wherein [the configuration of] the energy delivery device means is configured to create[s] a tightening of the lower esophageal sphincter while creating submucosal lesions in the lower esophageal sphincter.

78 (Amended). The apparatus of claim 50, further comprising:
an extension member means coupled to the expandable member means.

79 (Amended). The apparatus of claim 78, wherein a proximal portion of the extension member means is maneuverable by a medical practitioner.

REMARKS

The Specification has been amended to claim continuation status to the co-pending parent U.S. Patent Application Serial Number 09/007,237, filed January 14, 1998. The priority claim originally made in the parent case been also amended to delete continuation status based upon applications filed before the parent case.

The Specification has also been amended to correct typographical errors in the Brief Description of the Drawings, as was entered in the parent application.

This continuation application is being filed for the purpose of adding an additional inventor to the inventor listed in the parent application. More particularly, the inventor David Utley has been added.

A new Terminal Disclaimer is submitted herewith, signed on behalf of the assignee of record Curon Medical, Inc. The assignment is recorded at Reel 011567 and Frame 0469. The Terminal Disclaimer was required by the Examiner during prosecution of the parent application (U.S. Patent Application Serial No. 09/007,237, Examiner M. Peffley, Group 3739). The Assignment to Conway Stuart (renamed Curon Medical, Inc.) of Application Serial No. 09/007,283, filed January 14, 1998, as set forth in the new Terminal Disclaimer, is recorded at Reel 010283 and Frame 0012.

The Terminal Disclaimer filed in the parent case contained a typographical error and a clerical error and is thereby withdrawn. It contained a typographical error in referring to Application Serial No. 09/007,238 instead of Application Serial No. 09/007,283 (the '283 Application). It contained a clerical error in referring to Stuart Edwards as the owner of the parent application and the '283 Application instead of Conway Stuart Medical (now Curon Medical, Inc.).

The Preliminary Amendment also cancels claims 83-110 (which were directed to a non-elected invention in the parent application) and amends claims 1, 2, 10-18, 27-34, 50, 51, 60-66, 78 and 79 to reflect amendments submitted in the parent application.

Claims 1-82 as amended stood allowed in the parent application.

Claims 29, 46, 78 and 79 have been additionally amended to correct typographical errors.

The parent case will be allowed to go abandoned by not paying the Base Issue Fee, due for payment on July 24, 2001.

Entry of the foregoing Preliminary Amendment and affirmation of the allowance of the claims previously allowed in the parent case are respectfully requested.

Respectfully submitted,

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